

## SYSTEM AND METHOD FOR GENERATING FORWARD ERROR CORRECTION BASED ALARMS

### ABSTRACT OF THE INVENTION

5           A system and method are provided for generating alarms from forward error correction (FEC) data in a G.709 network-connected integrated circuit. The method comprises: receiving messages including forward error correction bytes; using the forward error correction bytes to detect errors in the messages; and, generating alarm signals in response

10 to the detected errors. Generating alarm signals in response to the detected errors includes generating a signal degrade (SD) signal in response to detecting a first number of errors (error density) within a predetermined time period. Likewise, generating alarm signals in response to the detected errors includes generating a signal fail (SF)

15 signal in response to detecting a second number of errors (second error density), greater than the first number, within the predetermined time period. The method further comprises: selecting an error type. Then, alarm signals are generated in response to the selected error type. The error types include a "1s" density alarm, a "0s" density alarm, a bytes

20 density alarm, and a sub-row density alarm.